

# ANSI/ASSP A10.28-2018

Safety Requirements for Work Platforms  
Suspended from Cranes or Derricks

PREVIEW ONLY



AMERICAN SOCIETY OF  
**SAFETY PROFESSIONALS**



PREVIEW ONLY

The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Professionals (ASSP) as secretariat of the ANSI accredited A10 Committee or individual committee members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this standard, ASSP or the A10 Committee does not ensure that adherence to these recommendations will protect the safety or health of any persons or preserve property.

**ANSI®**  
**ANSI/ASSP A10.28 – 2018**

**American National Standard  
Construction and Demolition Operations**

**Safety Requirements for Work Platforms  
Suspended from Cranes or Derricks**

Secretariat

**American Society of Safety Professionals**  
520 N. Northwest Highway  
Park Ridge, Illinois 60068

**Approved July 27, 2018**

**American National Standards Institute**

## **American National Standard**

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstance give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretation should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published September 2018 by

**American Society of Safety Professionals**  
**520 N. Northwest Highway**  
**Park Ridge, IL 60068**  
**(847) 699-2929 • [www.assp.org](http://www.assp.org)**

Copyright ©2018 by American Society of Safety Professionals  
All Rights Reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Printed in the United States of America

## Foreword (This Foreword is not a part of American National Standard A10.28-2018.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

- A10.1 Pre-Project & Pre-Task Safety & Health Planning
- A10.2 Safety, Health and Environmental Training (under development)
- A10.3 Powder-Actuated Fastening Systems
- A10.4 Personnel Hoists and Employee Elevators
- A10.5 Material Hoists
- A10.6 Demolition Operations
- A10.7 Use, Storage, Handling and Site Movement of Commercial Explosives and Blasting Agents
- A10.8 Scaffolding
- A10.9 Concrete and Masonry Construction
- A10.10 Temporary and Portable Space Heating Devices
- A10.11 Personnel Nets
- A10.12 Excavation
- A10.13 Steel Erection
- A10.15 Dredging
- A10.16 Tunnels, Shafts and Caissons
- A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
- A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
- A10.19 Pile Installation and Extraction Operations
- A10.20 Ceramic Tile, Terrazzo and Marble Work
- A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities (under development)
- A10.22 Rope-Guided and Non-Guided Workers' Hoists
- A10.23 Safety Requirements for the Installation of Drilled Shafts
- A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
- A10.25 Sanitation in Construction
- A10.26 Emergency Procedures for Construction Sites
- A10.27 Hot Mix Asphalt Facilities
- A10.28 Work Platforms Suspended from Cranes or Derricks
- A10.29 Aerial Platforms in Construction (under development)
- A10.31 Digger-Derricks
- A10.32 Personal Fall Protection Used in Construction and Demolition Operations
- A10.33 Safety and Health Program Requirements for Multi-Employer Projects
- A10.34 Public Protection
- A10.37 Debris Nets
- A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
- A10.39 Construction Safety and Health Audit Program
- A10.40 Reduction of Musculoskeletal Problems in Construction
- A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
- A10.43 Confined Spaces in Construction and Demolition Operations
- A10.44 Lockout/Tagout in Construction
- A10.46 Hearing Loss Prevention
- A10.47 Highway Construction Safety
- A10.48 Communication Structures
- A10.49 Control of Health Hazards

One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee standards. If these standards are adopted for governmental use, the reference of other national codes or standards in individual volumes may be

changed to refer to the corresponding regulations.

**Normative Requirements:** This standard uses the single column format common to many international standards. The normative requirements appear aligned to the left margin. To meet the requirements of this standard, machinery, equipment and process suppliers and users must conform to these normative requirements. These requirements typically use the verb “shall.”

*NOTE: The informative or explanatory notes in this standard appear indented, in italics, in a reduced font size, which is an effort to provide a visual signal to the reader that this is informative note, not normative text, and is not to be considered part of the requirements of this standard; this text is advisory in nature only. The suppliers and users are not required to conform to the informative note. The informative note is presented in this manner in an attempt to enhance readability and to provide explanation or guidance to the sections they follow.*

**Revisions:** The A10 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant section number(s), the proposed wording and the reason for the proposal. Pertinent documentation would enable the A10 Committee to process the changes in a more-timely manner.

**Interpretations:** Upon a request in writing to the Secretariat, the A10 Committee will render an interpretation of any requirement of the standard. The request for interpretation should be clear, citing the relevant section number(s) and phrased as a request for a clarification of a specific requirement. Oral interpretations are not provided.

No one but the A10 Committee (through the A10 Secretariat) is authorized to provide any interpretation of this standard.

**Approval:** Neither the A10 Committee nor American National Standards Institute (ANSI) approves, certifies, rates or endorses any item, construction, proprietary device or activity.

**Appendices:** Appendices are included in most standards to provide the user with additional information related to the subject of the standard. Appendices are not part of the approved standard.

**Checklists:** Checklists included in A10 standards may be copied and used in non-commercial settings only.

**Committee Meetings:** The A10 Committee meets twice per year. Persons wishing to attend a meeting should contact the Secretariat for information.

**Standard Approval:** This standard was processed and approved for submittal to ANSI by the American National Standards Committee on Safety in Construction and Demolition Operations, A10. Approval of the standard does not necessarily imply (nor is it required) that all Committee members voted for its approval. At the time ANSI approved this standard, the A10 Committee had the following members:

Richard King, CSP, Chair  
Steven Rank, Vice Chair  
Timothy R. Fisher, CSP, CHMM, ARM, CPEA, Secretary  
Lauren Bauerschmidt, MS Engr, CSP, Assistant Secretary  
Jennie Dalesandro, Administrative Technical Support

**Organization Represented**

**Name of Representative**

3M

Raymond A. Mann

Accident Prevention Corporation

Mike Boraas

AGC of America

Frank Burg, CSP, P.E.

American Insurance Services Group

Terry Krug, CSP, CIH

American Society of Civil Engineers

Michael McCaffrey

American Society of Safety Professionals

Kevin Cannon

American Wind Energy Association

Thad Nosal

American Work Platform Training Inc.

James G. Borchardt, CSP, CPE, CPSM, CRIS

APT Research, Inc.

John O'Connor, P.E.

Associated Builders and Contractors, Inc.

Harlan Fair, P.E.

A-Z Safety Resources, Inc.

Ken Shorter, CSP, ARM, TCDS

Barton Malow Company

A. David Brayton, CSP, CPC

Black & Veatch

Christopher Daniels

Building & Construction Trades Department

Michele Myers Mihelic

Century Elevators

Dennis W. Eckstine

Clark Construction Group

Saralyn Dwyer

Cole-Preferred Safety Consulting, Inc.

Stephen Wiltshire, MSc

Construction & Realty Safety Group, Inc.

Greg Sizemore

CPWR – The Center for Construction Research

Jane F. Williams, CPEA, CCA

& Training

Jeffrey Oliver, CSP, CHST

Edison Electric Institute

Mark Hagganmaker

Elevator Industry Work Preservation Fund

Richard F. King, CSP

Ellis Fall Safety Solutions, LLC

John H. Johnson, CSP

Engineering Systems, Inc.

Chris Cain, CIH

Fluor Corporation

Gary Gustafson

Gilbane Building Co.

Paula Manning

Richard D. Hislop

Eric Schmidt, P.E.

Kurt Dunmire, CSP, CHST

Barry Cole

Ron Lattanzio

Frank Marino

Bruce Lippy, Ph.D., CIH, CSP

Babak Memarian, Ph.D.

Jonathan Kerns

Adam Frederick

Michael D. Morand

James Demmel

J. Nigel Ellis, Ph.D., P.E., CSP, CPE

John T. Whitty, P.E.

David Ahearn, P.E.

Edward J. Tuczak, P.E.

Michael Weatherred, CSP

Jim Bates, CSP

Robert Hinderliter, ASP

Thomas Trauger, CSP, ARM, CRIS

Richard Hislop

Shawn Bradfield

Independent Electrical Contractors, Inc.  
Innovative Safety, LLC  
Institute of Makers of Explosives  
International Association of Bridge, Structural,  
Ornamental and Reinforcing Iron Workers  
International Association of Heat & Frost  
Insulators & Allied Workers  
International Brotherhood of Boilermakers  
International Brotherhood of Electrical Workers  
International Brotherhood of Teamsters  
International Safety Equipment Association  
International Union of Bricklayers & Allied  
Craftworkers  
International Union of Operating Engineers  
IUPAT  
Kiewit Power Constructors Co.  
Laborers' International Union of North America  
Lamar Advertising  
Lendlease Corporation  
Liberty Mutual  
Marsh LLC  
Maryland Occupational Safety & Health  
Mechanical Contractors Association of America  
Miller & Long Concrete Construction  
National Association of Home Builders  
National Association of Railroad Safety  
Consultants & Investigators  
National Electrical Contractors Association  
National Institute for Occupational Safety & Health  
National Railroad Construction & Maintenance  
Association  
National Roofing Contractors Association  
National Society of Professional Engineers  
NESTI, Inc.

Paul Dolenc  
Jerry Rivera  
Daniel M. Paine  
Barbara Paine  
Joshua Hoffman  
Susan JP Flanagan  
Steven Rank  
Tim Keane  
Mark Garrett  
Bridget Connors  
David Mullen  
Dan Gardner  
LaMont Byrd, CIH  
Asher Tobin  
Cristine Fargo  
Michael Kassman, CHST  
Gerard Scarano  
Christopher Tremi  
Barbara McCabe  
Kenneth Seal  
Rusty Brown, CSP  
Dave Hinz  
Walter A. Jones, MS, CIH  
Travis Parsons  
Chuck Wigger, CSP  
Beth Phelps  
Joel Pickering, CET, CHMM  
Michael Lentz  
Daniel P. Lavoie, CSP, ARM  
Stan Williams, ARM, CHST  
Timothy Bergeron, CSP  
Mischelle Vanreusel  
Michael Daughaday  
Peter Chaney, MS, CSP  
Dennis Langley  
Frank Trujillo  
Alex Rodas, CHST  
Robert Matuga  
Chelsea Vetick  
Lewis Barbe, P.E., CSP, CRSP  
Michael J. Johnston  
Wesley Wheeler  
Thomas G. Bobick, Ph.D., P.E., CSP, CPE  
G. Scott Earnest, Ph.D., P.E, CSP  
Jeffrey D. Meddin, CSP, CHEP, CHCM  
Harry Dietz  
Tom Shanahan  
E. Ross Curtis, P.E., DFE, F.ASCE, F.NSPE  
Paul Swanson, P.E.  
Michael Hayslip, P.E., CSP  
Jack Madeley, P.E., CSP



Operative Plasterers and Cement Masons  
International Association  
PATMI

Phoenix Fabricators and Erectors, Inc.

Professional Safety Consultants, Inc.

Safety Environmental Engineering, Inc.  
Scaffold & Access Industry Association

Shafer Safety Solutions, LLC  
Sheet Metal & Air Conditioning Contractors  
National Association  
SMART Union

SPA Incorporated  
Stock Enterprises  
The Association of Union Constructors

Turner Construction Company

U.S. Army Corps of Engineers

U.S. Department of Energy

United Association of Plumbers & Pipefitters

United Brotherhood of Carpenters and  
Joiners of America  
United Union of Roofers, Waterproofers &  
Allied Workers  
West Virginia University Extension Service

ZBD Constructors, Inc.

Deven Johnson

James A. Borchers  
Craig Pratt  
Luke Humphrey  
Frank Massey  
Jim E. Lapping, MS, P.E., CSP  
Kathryn Stieler  
Matthew Murphy  
Ted Beville  
DeAnna Martin  
Carmen Shafer, CSP, CHST  
Mike McCullion, CSP, ARM

Randall Krocka  
Charles Austin, MS  
Stanley Pulz, CSP, P.E.  
Steve Stock, P.E., PLS  
Wayne Creasap, II  
Kathleen Dobson, CSP, CHST, STS.C  
Cindy L. DePrater, ALCM  
Abdon Friend, CSP  
Michelle Brain  
Steven Washington  
Terry Meisinger  
Maurice Haygood  
Cheryl Ambrose, CHST, OHST  
Rich Benkowski  
William Irwin  
Dale Shoemaker  
Richard Tessier  
Keith J. Vitkovich  
Brandon Takacs, CSHM  
Mark Fullen, Ed.D., CSP  
Greg Thompson, CSP  
Jeffrey D. Meddin, CSP, CHEP, CHCM

**Independent Experts & Observers:**

Alliance of Hazardous Materials Professionals  
Conner Strong & Buckelew

Lockton Companies  
National Association of Tower Erectors

U.S. Department of Labor – OSHA

Warfel Construction Company

Carl Heinlein, CSP, ARM, CRIS  
Eric Voight  
Ken Bogdan  
Jason Scollin, CSP, ASP, MS, STC-C  
John P. Jones  
Kathryn Stieler  
Dean McKenzie  
Scott Ketcham  
Jeffrey I. Pierce  
Kevin Stoltzfus

**Subgroup A10.28 had the following members:**

Frank Trujillo (Chair)

Frank Burg, CSP, P.E. (Liaison)

Barry Cole

Kathleen Dobson, CSP, CHST, STS.C

Richard Hislop

Luke Humphrey

Walter Jones, MS, CIH

Steve Miller

Michael Nordstrom

PREVIEW ONLY

# Contents

1. Scope.....	12
1.1 Application .....	12
1.2 General Requirements .....	12
1.3 Critical Lift Plan .....	12
2. Definitions .....	13
3. Crane and Derrick Criteria.....	14
3.1 Live Booms .....	14
3.2 Load Line .....	14
3.3 Swing Brake or Lock .....	14
3.4 Weight Limitations.....	14
3.5 Boom Angle Indicator .....	14
3.6 Load Radius Indicator .....	14
3.7 Level Grade.....	14
3.8 Outriggers .....	14
3.9 Two-Blocking Prevention.....	14
3.10 Crane Manufacturers' Recommendations .....	14
4. Crane and Derrick Inspection.....	15
4.1 Components.....	15
4.2 Frequency .....	15
4.3 Repair Requirements .....	15
5. Suspended Work Platform Design .....	15
5.1 Approval.....	15
5.2 Minimum Safety Design Factor.....	15
5.3 Capacity Identification .....	15
5.4 Access Gate.....	15
5.5 Overhead Protection .....	15
5.6 Perimeter Protection.....	15
5.7 Fall Protection .....	16
5.8 Grab Rail.....	16
5.9 Stability .....	16
5.10 Access Height .....	16
6. Suspended Work Platform Construction.....	16
6.1 Edges.....	16
6.2 Weld Inspection.....	16
6.3 Welding Competence .....	16

6.4 Attachment Points .....	16
7. Suspended Work Platform Testing and Inspection .....	16
7.1 Frequency of Inspection .....	16
7.2 Proof Testing .....	17
7.3 Trial Lift .....	17
8. Rigging .....	17
8.1 Distribution of Loads .....	17
8.2 Limitations .....	17
9. Suspended Work Platform Loading .....	17
9.1 Use .....	17
9.2 Attachment .....	17
9.3 Capacity .....	17
9.4 Positive Connection .....	17
10. Personal Protective Equipment .....	18
10.1 General .....	18
10.2 Personal Fall Arrest Equipment .....	18
11. Signaling and Communications .....	18
11.1 Positioning .....	18
11.2 Positive Means .....	18
12. Safe Work Practices .....	18
12.1 Working from Suspended Platforms .....	18
12.2 Number of Personnel .....	18
12.3 Operating Ability .....	18
12.4 Setting Brakes and Locks .....	18
12.5 Operator Positioning .....	18
12.6 Outriggers .....	18
12.7 Personnel Positioning .....	19
12.8 Securing Suspended Platform .....	19
12.9 Tag Lines .....	19
12.10 Travel .....	19
12.11 Weather .....	19
12.12 Training .....	19
12.13 Maintenance .....	19
12.14 Pre-Lift Meeting .....	19

## AMERICAN NATIONAL STANDARD A10.28 SAFETY REQUIREMENTS FOR WORK PLATFORMS SUSPENDED FROM CRANES OR DERRICKS

### 1. Scope

This standard applies to platforms suspended from the load lines of cranes or derricks in order to:

1. perform work at elevations that cannot be reached in a safe manner by other types of scaffolds or aerial work platforms; or
2. transport personnel to elevations where other means of access are unsafe or impractical because of design or worksite conditions.

### 1.1 Application

This standard shall apply to platforms hoisted by cranes or derricks in order to:

1. perform work at elevations that cannot be reached in a safe manner by other types of scaffolds or aerial work platforms, as determined by a qualified person; or
2. transport personnel to elevations where other means of access are unsafe or impractical because of design or worksite conditions. Safe use of such equipment is dependent upon the user following all provisions contained herein.

### 1.2 General Requirements

The use of a crane or derrick to hoist employees on a personnel platform is acceptable only after the qualified person (person responsible for the lift) has completed a job safety analysis (JSA) that includes consideration of conventional means of access such as a personnel hoist, ladder, stairway, aerial lift, elevating work platform or scaffold as a practical alternative. The JSA shall also include the following at a minimum and shall be maintained on the jobsite:

1. Jobsite information including physical description of area (north, east, south, west).
2. Reasons for lift including factors prohibiting the use of scaffolds, aerial work platforms, ladders or other such equipment; such as considerations related to environmental and work factors such as ability to reach work area in a feasible manner; impact of ice, snow, oil on ladders, steps or runways; structural stability, etc.
3. Steps to be followed to complete the lift.
4. Hazards associated with each step in the process.
5. Controls associated with each hazard.

### 1.3 Critical Lift Plan

A critical lift plan identifying the following must be prepared in advance and signed by the qualified person.

**1.3.1** A critical lift plan shall include the following:

- Make, model and serial number of crane or derrick.
- Configuration of crane or derrick including boom length, jib, counterweight, wire rope allowable line pull and capacities at maximum expected radius.
- Ground conditions and blocking required for stability, proximity to power lines and other overhead hazards.